

# Electronic Bridge Staking Data

## **Steve Seivert**

Transportation Engineer

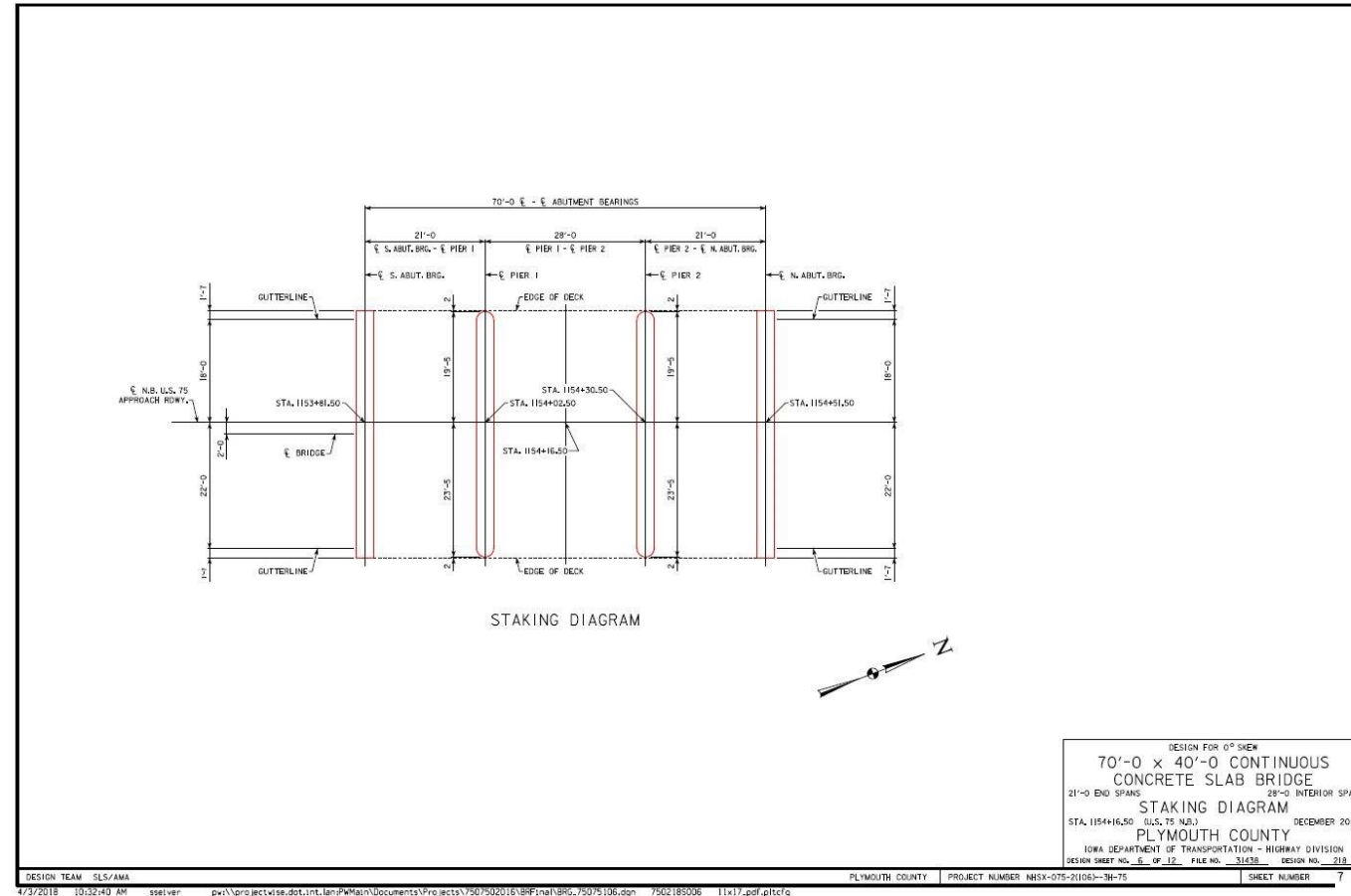
Office of Bridge and Structures

Iowa Department of Transportation

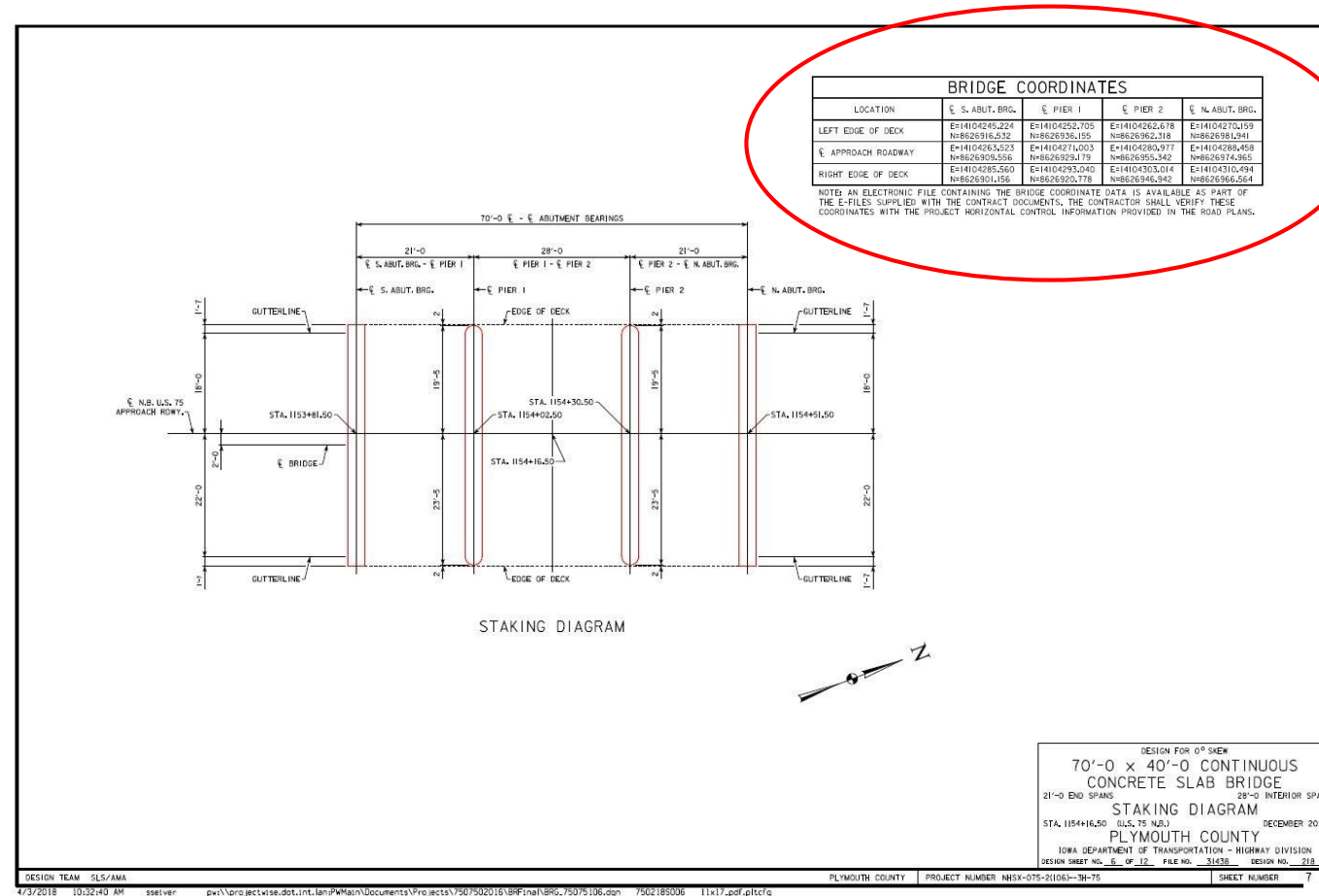
Office: 515-233-7949

[steve.seivert@iowadot.us](mailto:steve.seivert@iowadot.us)

# Current Staking Diagram for 3-span



# Bridge Coordinate Data



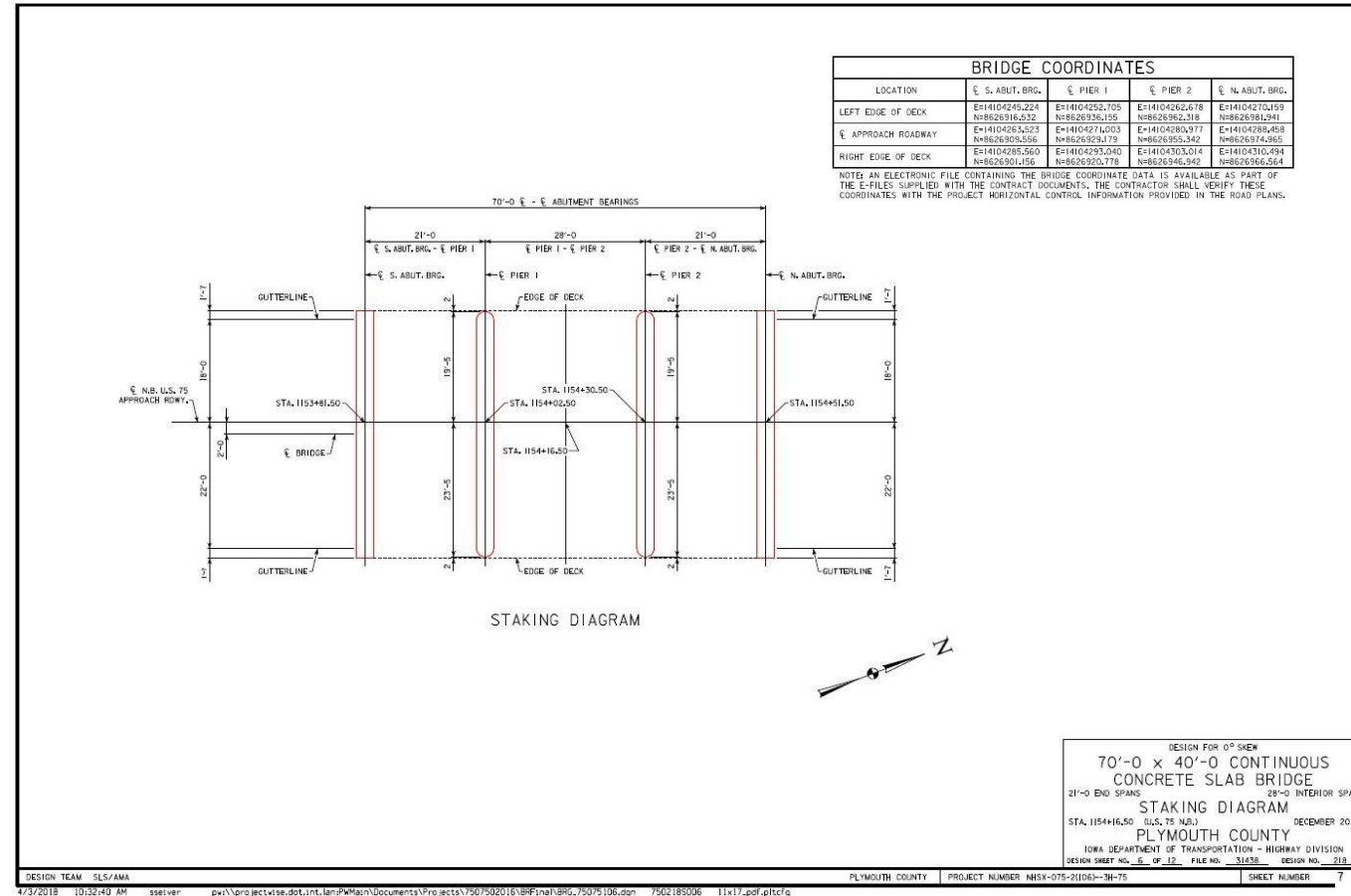
# Bridge Coordinate Data

## 3-Span Example:

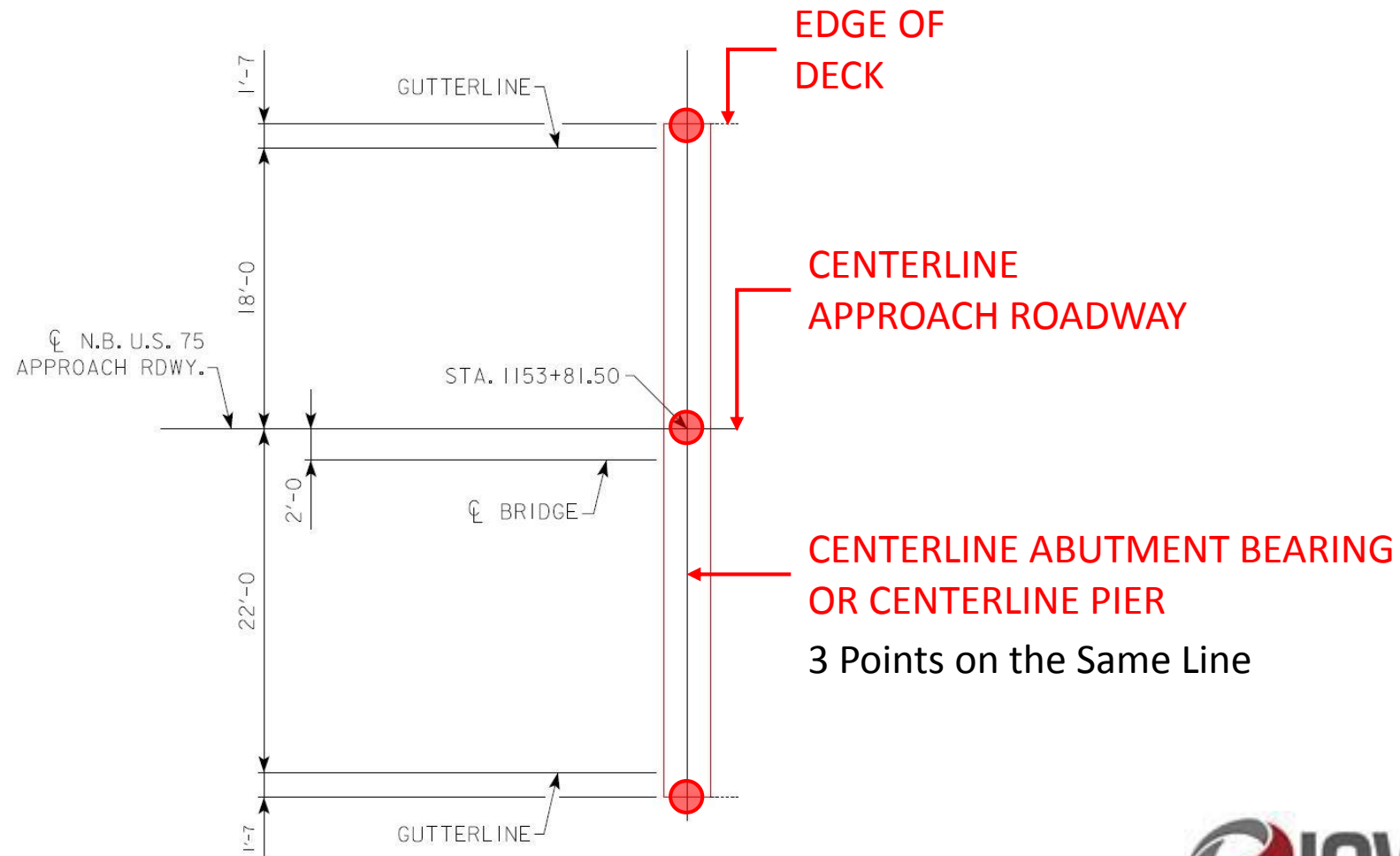
BRIDGE COORDINATES				
LOCATION	℄ S. ABUT. BRG.	℄ PIER 1	℄ PIER 2	℄ N. ABUT. BRG.
LEFT EDGE OF DECK	E=14104245.224 N=8626916.532	E=14104252.705 N=8626936.155	E=14104262.678 N=8626962.318	E=14104270.159 N=8626981.941
℄ APPROACH ROADWAY	E=14104263.523 N=8626909.556	E=14104271.003 N=8626929.179	E=14104280.977 N=8626955.342	E=14104288.458 N=8626974.965
RIGHT EDGE OF DECK	E=14104285.560 N=8626901.156	E=14104293.040 N=8626920.778	E=14104303.014 N=8626946.942	E=14104310.494 N=8626966.564

NOTE: AN ELECTRONIC FILE CONTAINING THE BRIDGE COORDINATE DATA IS AVAILABLE AS PART OF THE E-FILES SUPPLIED WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL VERIFY THESE COORDINATES WITH THE PROJECT HORIZONTAL CONTROL INFORMATION PROVIDED IN THE ROAD PLANS.

# Bridge Coordinate Data

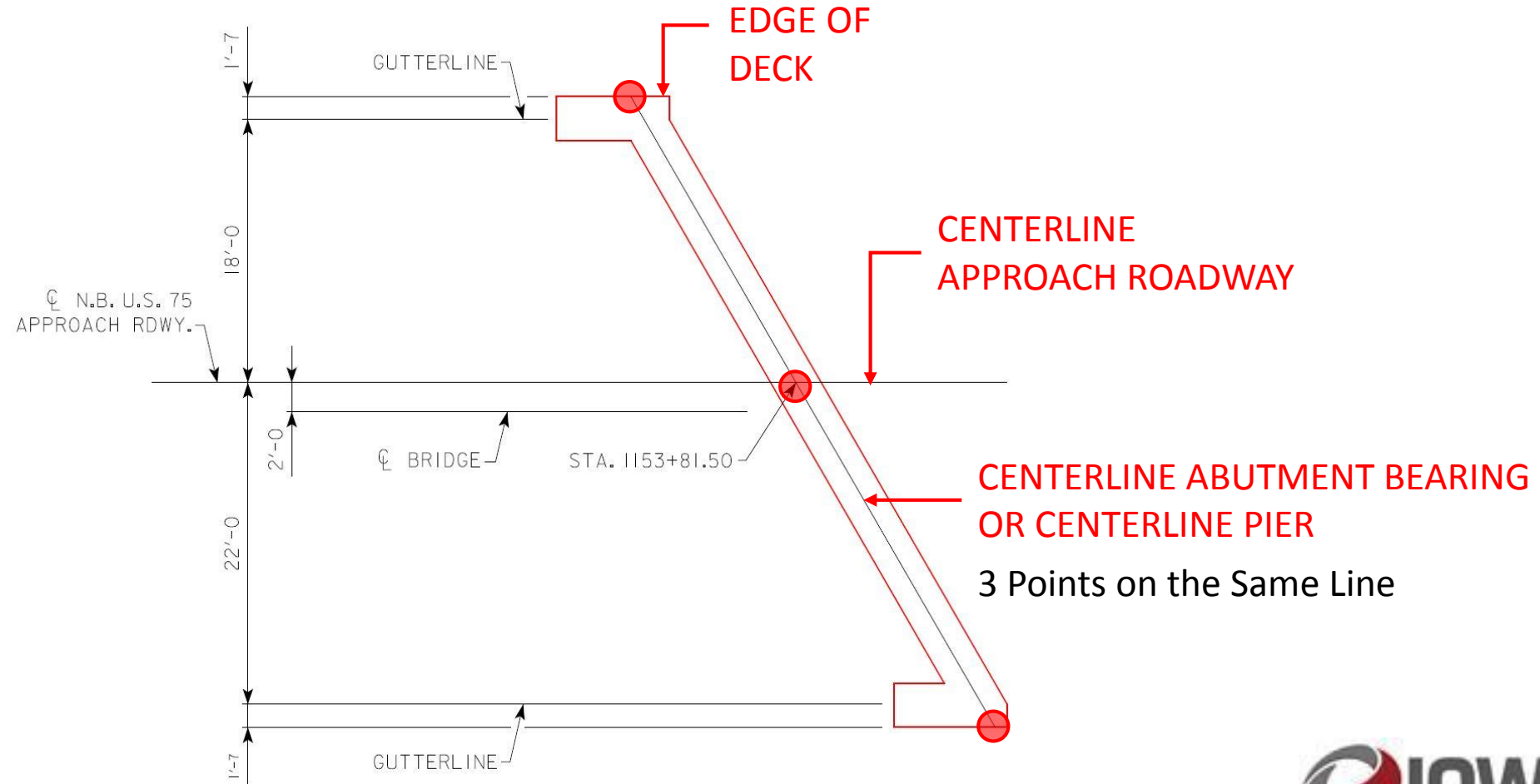


# Key Points for Each Substructure Element

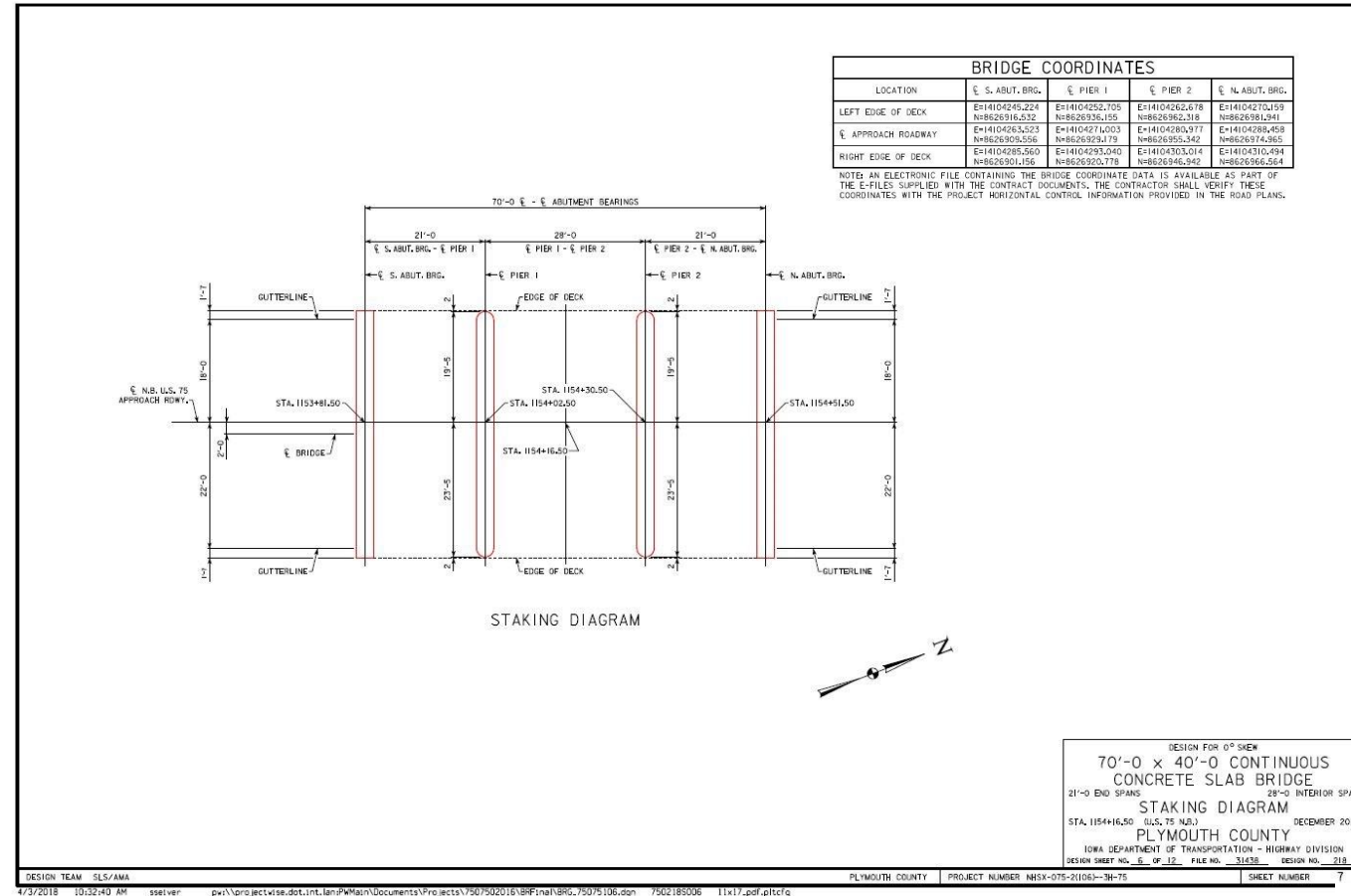


# Key Points for Each Substructure Element

## Skewed Abutment Example

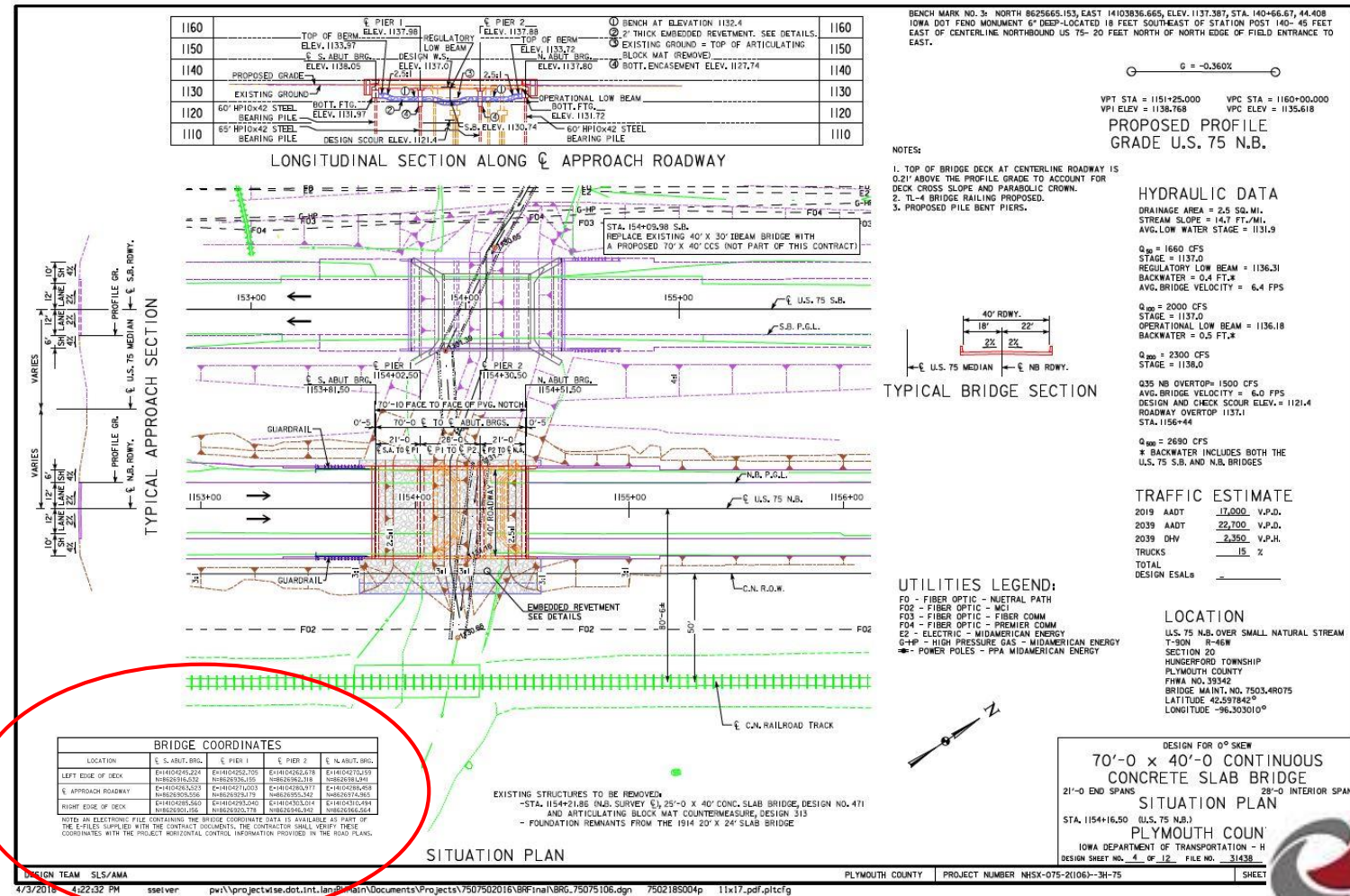


# Staking Diagram

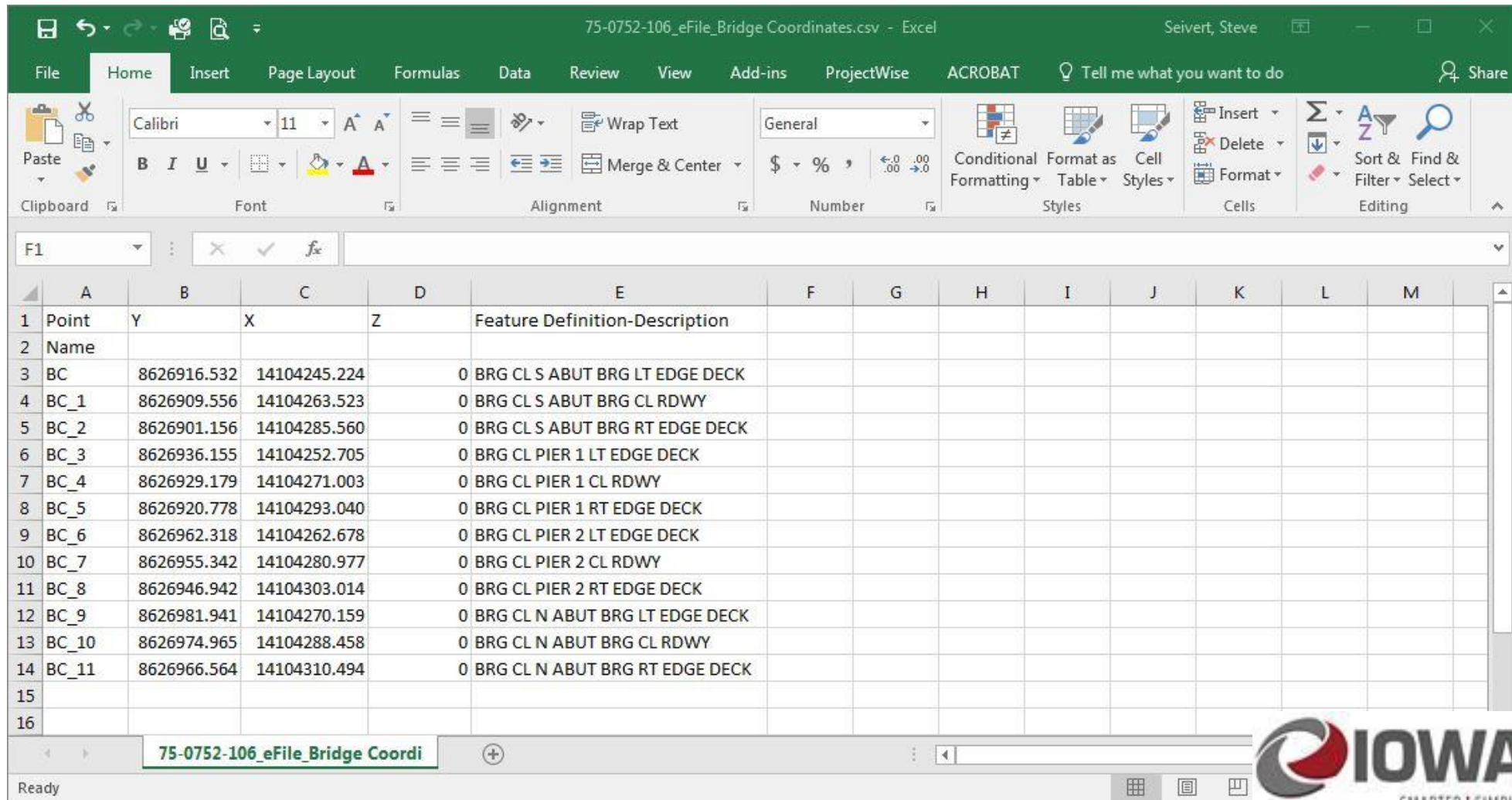




# Situation Plan



# eFile CSV(MS-DOS)



75-0752-106\_eFile\_Bridge Coordinates.csv - Excel

Seivert, Steve

File Home Insert Page Layout Formulas Data Review View Add-ins ProjectWise ACROBAT Tell me what you want to do Share


Clipboard Font Alignment Number Styles Cells Editing

F1

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Point	Y	X	Z	Feature Definition-Description								
2	Name												
3	BC	8626916.532	14104245.224	0	BRG CL S ABUT BRG LT EDGE DECK								
4	BC_1	8626909.556	14104263.523	0	BRG CL S ABUT BRG CL RDWY								
5	BC_2	8626901.156	14104285.560	0	BRG CL S ABUT BRG RT EDGE DECK								
6	BC_3	8626936.155	14104252.705	0	BRG CL PIER 1 LT EDGE DECK								
7	BC_4	8626929.179	14104271.003	0	BRG CL PIER 1 CL RDWY								
8	BC_5	8626920.778	14104293.040	0	BRG CL PIER 1 RT EDGE DECK								
9	BC_6	8626962.318	14104262.678	0	BRG CL PIER 2 LT EDGE DECK								
10	BC_7	8626955.342	14104280.977	0	BRG CL PIER 2 CL RDWY								
11	BC_8	8626946.942	14104303.014	0	BRG CL PIER 2 RT EDGE DECK								
12	BC_9	8626981.941	14104270.159	0	BRG CL N ABUT BRG LT EDGE DECK								
13	BC_10	8626974.965	14104288.458	0	BRG CL N ABUT BRG CL RDWY								
14	BC_11	8626966.564	14104310.494	0	BRG CL N ABUT BRG RT EDGE DECK								
15													
16													

75-0752-106\_eFile\_Bridge Coordi

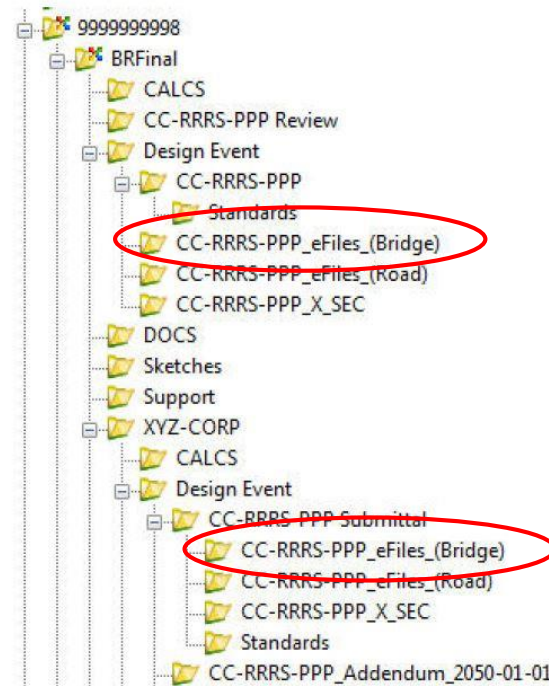
Ready

 IOWA DOT  
SMARTER | SIMPLER | CUSTOMER DRIVEN

# eFile

Project Folder Structure in ProjectWise – Bridge Office

May 4, 2018



The file shall be made available to the Contractor as part of the eFiles supplied with the contract documents at turn-in.

# Review

## TABLE

- Need to ensure the bridge is shown in correct coordinate system. Reference the Structures model if needed.
- Use MicroStation CADD tools to insert and edit cell.
- 3-points per element.
- Place on Staking Diagram or Situation/Site Plan

## eFile

- File format: Standard IDOT Survey format, CSV (MS-DOS)
- Can create and export using OpenRoads tools - need correct configuration.
- Can also create using Excel.
- Store file in ProjectWise “eFiles\_(Bridge)” folder.

SEE DOCUMENTATION FOR STEP-BY-STEP PROCESS